MICROBIAL STRAINS AND PROCESSES FOR THE MANUFACTURE OF BIOMATERIALS

Abstract of the Disclosure

DNA constructs and genetically engineered microbial strains constructed using these DNA constructs, which produce a nuclease enzyme with specificity for DNA and/or RNA, are provided. These strains secrete nuclease into the periplasm or growth medium in an amount effective to enhance productivity and/or recovery of polymer, and are particularly suited for use in high cell density fermentation processes. These constructs are useful for modifying microbial strains to improve production and recovery processes for polymers such as intracellular proteins, such as enzymes, growth factors, and cytokines; for producing polyhydroxyalkanoates; and for producing extracellular polysaccharides, such as xanthan gum, alginates, gellan gum, zooglan, hyaluronic acid and microbial cellulose.